16130

Results of Structural Testing for FCS Common Chassis Prototype Concept

14th Annual GVSS
Naval Postgraduate School
Monterey, CA
March 29-April 1 2004

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
29 MAR 2004	**N/A**	**-**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Results of Structural Testing for FCS Common Chassis Prototype Concept	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
Hodges, Scott E.	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)	8. PERFORMING ORGANIZATION REPORT NUMBER
US ARMY TACOM 6501 E 11 Mile Road Warren, MI 48397-5000	**16130**
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	TACOM TARDEC
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)
	16130

12. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES

Presented at 14th Annual GVSS, Naval Postgraduate School, Monterey, CA, March 29-April 1 2004, The original document contains color images.

14. ABSTRACT

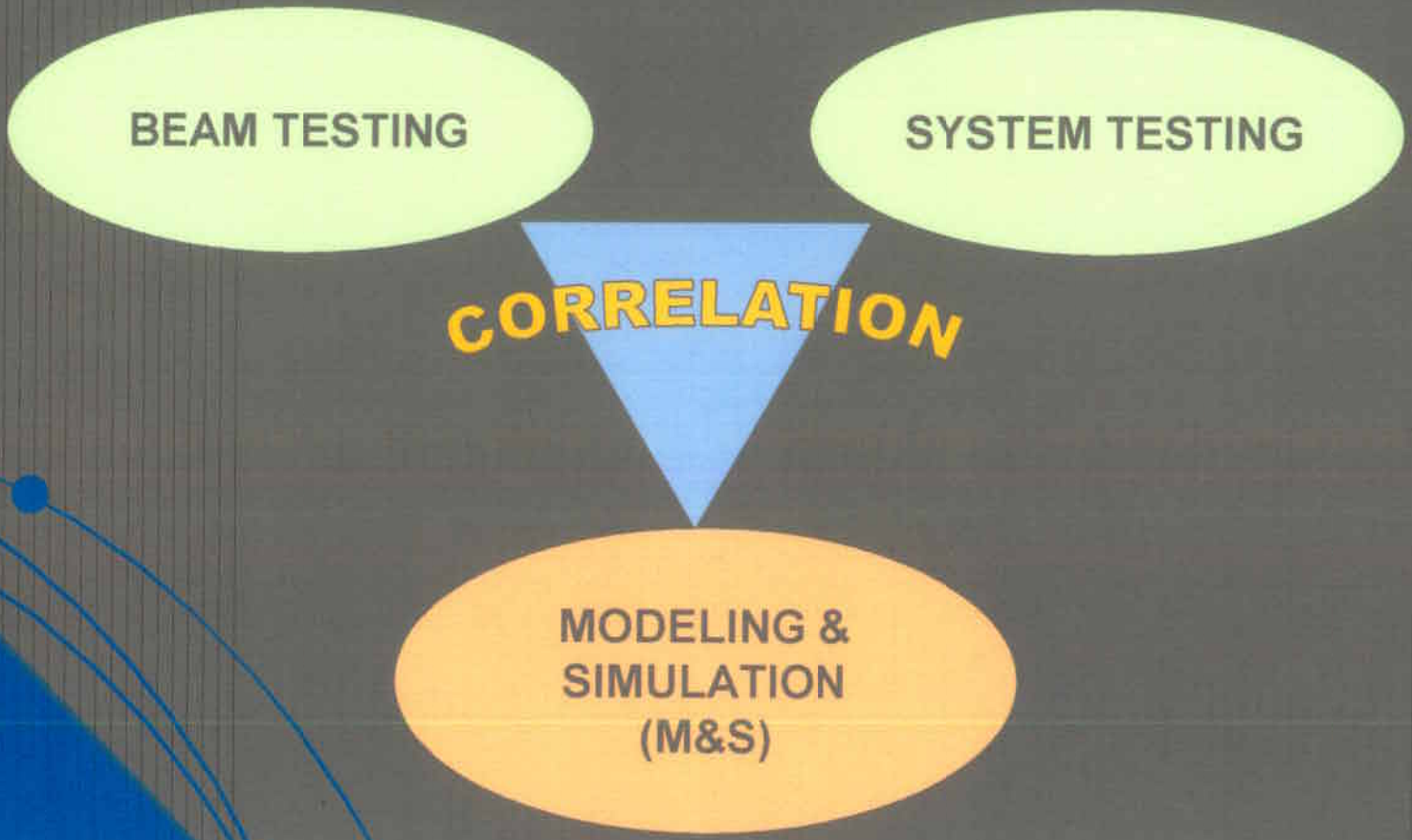
15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**SAR**	**10**	

Briefing Outline

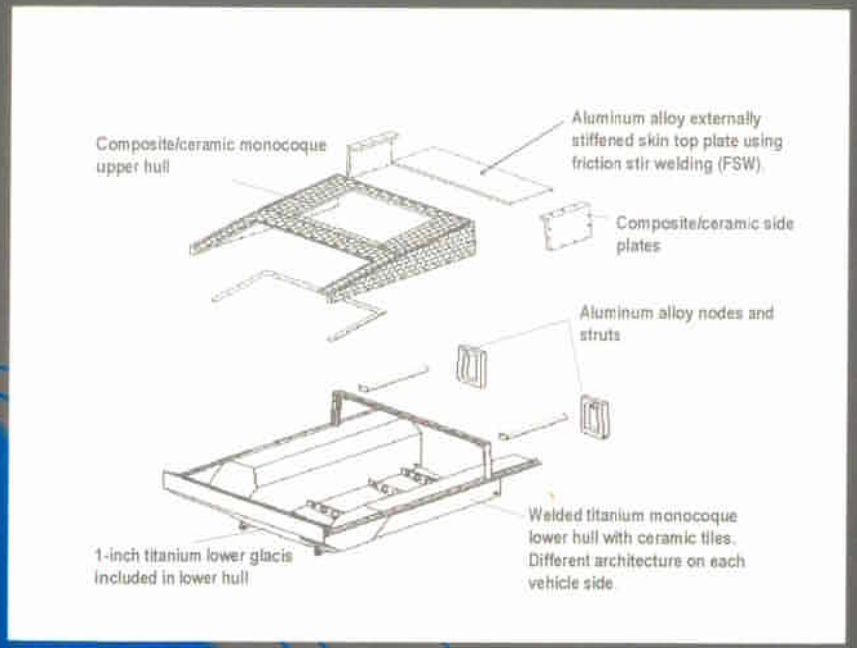
- Program Description
- Conclusions
- Recommendations/Path Forward
- FCS benefits

Program Description

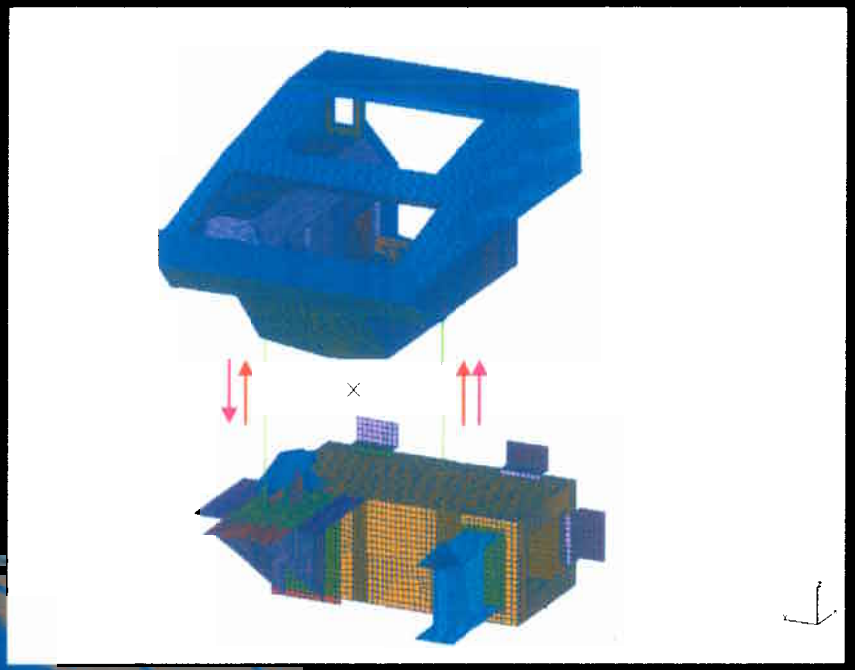


TARDEC

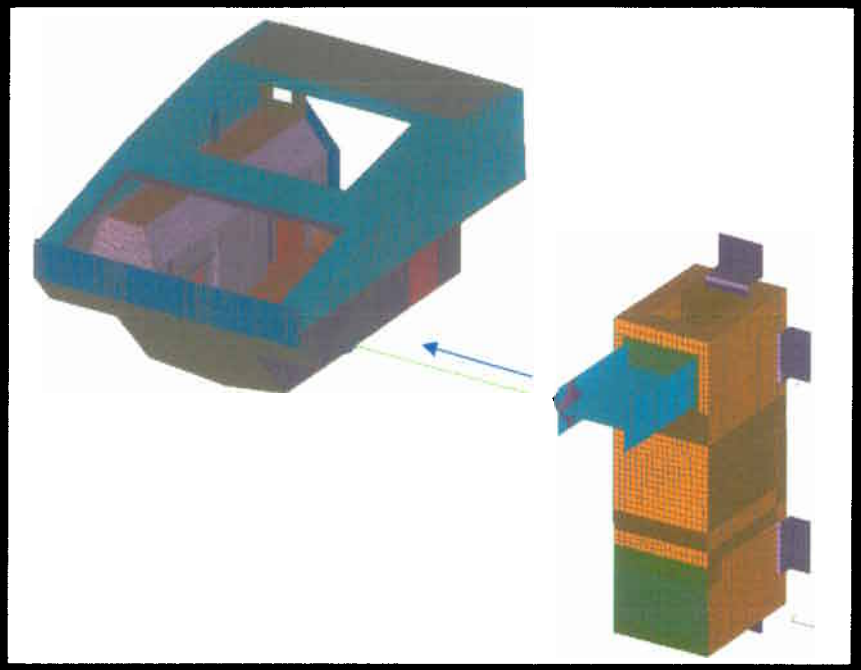
X-2 Test Structure



Structural Tests Performed



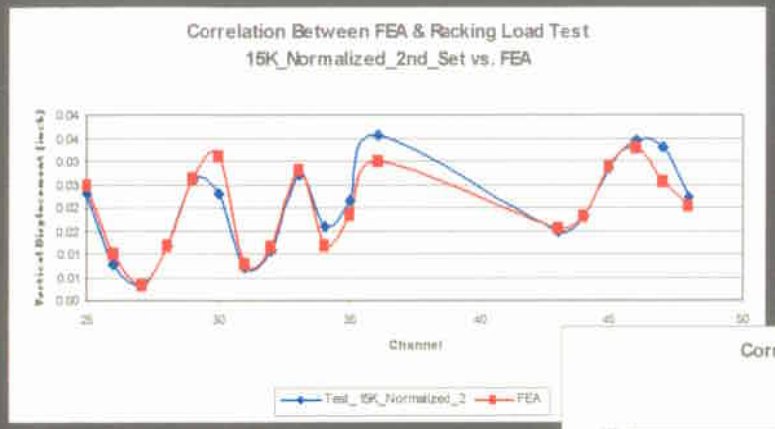
Racking/Vertical



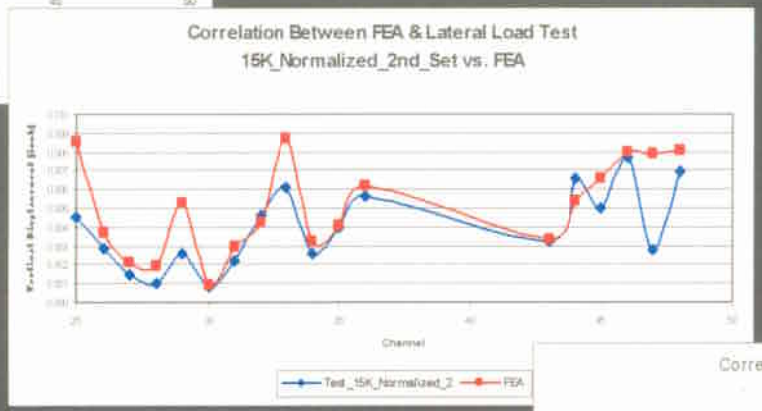
Horizontal

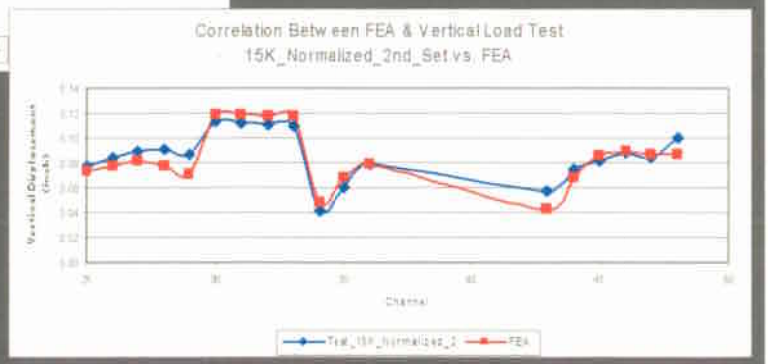
Maximum test loads were considered most severe

Conclusions



- Correlation was successful





- Still issues of concern

Conclusions (cont')

- Vehicle testing was successful
  - Structure withstood loads
  - Overall vehicle structure was still linear and elastic
  - Local failures occurred

Recommendations

- More materials testing
  - Developmental tests needed for better characterization
- Further racking tests
  - Stiffen support structure
- Build/Test different structures
  - Space-frame structure

Benefits to FCS

- Helps validate state of M&S technology on a vehicle hull structure
  - Tells the level of reliability that can be anticipated
- Testers working with Analyzers
  - Data exchange protocols can be established and refined

More Information

- Hodges, Bogetti, Meldrum, and Smith, "*FCS X-2 TEST SECTION: FINAL REPORT*", TARDEC, 2004
- For report information please contact:

Scott E. Hodges
RDECOM-TARDEC
(586) 574-8709
hodgess@tacom.army.mil

TARDEC